


Hampden

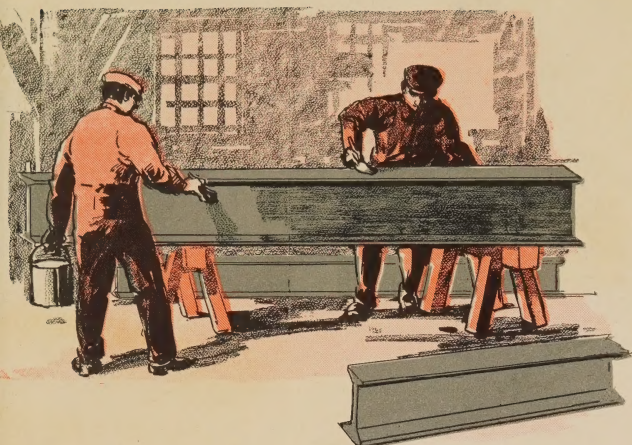
STRUCTURAL

PAINTS





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THERE is an old Greek saying that
“Time as he grows old teaches
many things.”

Nearly seventy years ago the
Hampden Paint & Chemical Co. began
the manufacture of paints and colors and
has been at it ever since.

The coatings recommended in this book-
let, as providing the best known protec-
tion for structural metal, have back of
them several decades of our own investi-
gation and experience, reinforced by the
findings of others, notable among which
was the Atlantic City Test Fence investi-
gation conducted by the American Society
for Testing Materials, covering a period
of several years.

Many Men of Many Minds

It is true that various theories are held
by paint manufacturers and construction
engineers regarding pigments or combi-
nations of pigments suitable for metal
protection, explained doubtless by the
fact that no problem concerning paints
presents more numerous and diverse
factors for consideration than are met

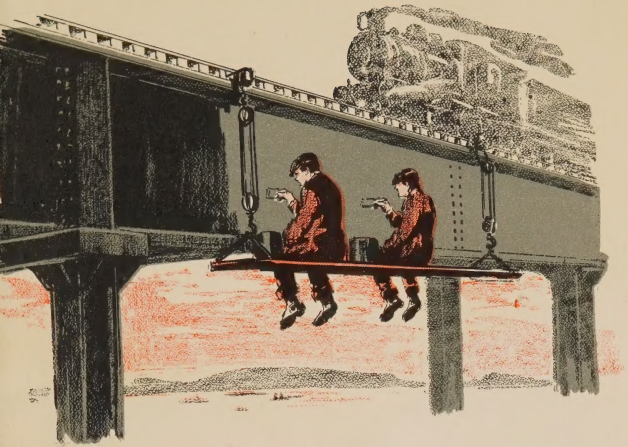
in the manufacture of metal protective coatings. Despite this the best modern opinion so limits the number of really high grade pigments of reasonable cost for exterior metal paint that they can be counted on the fingers of one hand. When other pigments are favored it is not always because their limitations are unknown but because users often prefer to deal with familiar formulas rather than adopt newer ones, however well recommended they may be. Thus many paint manufacturers carry on an extensive business in paints containing pigments which they are frank to admit are not the best but for which there is a demand that they are bound to supply.

Pigments Not All of Paint

While too much importance cannot be attached to the use of proper pigments in structural paints, the vehicle is hardly less important. Many a paint job is ruined by the use of poor oil. Pure raw linseed oil is the best known vehicle for metal paints and only the best oil should be used. Machine mixing is always more satisfactory for metal paints. Hand mixing is difficult and unreliable, owing to the character of the pigments used. Driers also require more careful handling than they usually receive in hand mixing.

Electrolysis—What Is It?

The whole purpose of coating metals with paint is, of course, to protect the surface from corrosion. The modern and generally accepted explanation for corrosion of metals is Electrolysis, which is, briefly,



galvanic action, in which moisture, aided by chemical impurities, either in the air, the steel, or in the paint cause negative electrical action on the metal, which is positive, resulting in the precipitation of the metal into corrosion or rust and the gradual decomposition of the metal structure.

Why Some Paints For Structural Metals Fail

It is obvious that structural paints must provide an effective insulation for metal surfaces against the electrical action induced by moisture. In order to do this the coating must be proof against sudden expansion and contraction caused by heat and cold. It must be sufficiently elastic to withstand vibration, tough enough to protect against abrasion and of a nature which provides immunity from destructive chemical gases.

Furthermore: No paint will survive on metal surfaces unless it is carefully applied only after scale, grease and all foreign matter has been completely

removed. Lack of care in working the paint in and around irregular or rough places leaves vent holes into which moisture soon makes its way, starting a spreading coat of rust.

Many Engineers and Architects properly lay stress upon and carefully specify the conditions under which the very important first shop coat of paint is applied at the mill and the kind of paint which shall be used. This is especially necessary where the metal is to go into structures where it is exposed to weather.

Some Theories Back of Metal Paint Formulas

Metal coatings have so many enemies to fight, such as adverse atmospheric conditions, expansion, contraction, gases, etc., etc., that the paint chemist has often sought by combining various pigments which offer special resistance to certain individual forms of paint decay to build up a group resistance which is immune from all forms of attack.

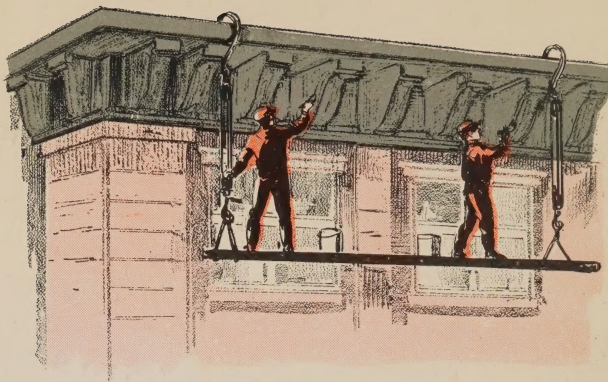
This has developed an opinion among some paint authorities that the best results are obtained by combining several pigments. Curiously enough, these combination pigment formulas very often ignore altogether a pigment which has rated higher than any other individual or combined pigments generally used in paint manufacture, when put to test in various sections of the country by competent paint authorities. We refer particularly to Sublimed Blue Lead.

Sublimed Blue Lead

In the Atlantic City Test Fence investigation previously referred to, under salt air conditions most antagonistic to metal surfaces, three hundred large metal panels were painted three-coat work in 1908, each panel representing a different formula of single or combined pigment paints. After six years, 1914, the panels painted with Sublimed Blue Lead received the highest rating for condition out of an original field of forty-nine, with the one exception of those painted with American Vermilion, which is too expensive a pigment to be practical and little of it used in metal paints by any manufacturer.

The gratifying success which has followed the use of Sublimed Blue Lead for metal protection under varying climatic conditions and in atmospheres charged with gases and fumes highly injurious to most paint surfaces, taken with our own investigations and tests, lead us to recommend Sublimed Blue Lead Metal Paint as the very best coating possible to obtain for metal surfaces at anything like reasonable cost.

For this reason our No. 502 Structural Paint is a Sublimed Blue Lead Paint. Into it goes not only the conceded best materials for metal protection but the process of manufacture is the fruit of nearly seventy years of paint making experience.



Facts About Hampden No. 502 Structural Gray Paint

Basicity

Authorities generally agree that the more basic the pigment the more perfect the protection against rust. The pigment used in Hampden No. 502 is Sublimed Blue Lead, the most highly basic of all lead pigments used for metal paint.

Durability

Hampden No. 502 contains the longest lived pigment yet discovered for practical paint making, together with well settled, treated raw linseed oil, the best vehicle known. The paint also contains sufficient sharp particles, considered essential in good paint making, to secure a tenacious grip on the surface painted.

Elasticity

It is obvious that no hard, unyielding coating can endure for any considerable length of time. The well known life of Sublimed Blue Lead, when mixed with pure, treated raw linseed oil is in itself the best evidence of the high degree of elasticity in Hampden No. 502 Structural Gray Paint.

Fineness

The pigment used in Hampden No. 502 is a fume product, developed entirely by combustion — hence nothing is smoother, finer and more easy to work into pitted rough surfaces and angles. Moreover, the pigment in this paint does not harden in the container nor does it liver when allowed to stand after the package is opened.

Spreading Power

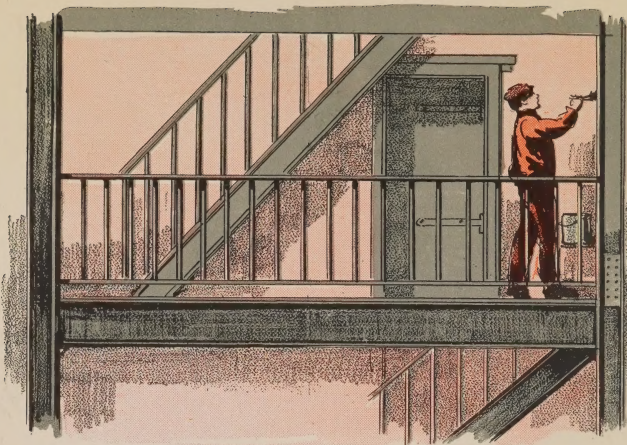
No paint will spread over a greater surface than will the treated linseed oil which forms the vehicle. The addition of pigment in sufficient quantities to cover properly will necessarily reduce the spreading power. Owing to the fineness of pigment in Hampden No. 502, however, the spreading power is exceptionally high and one gallon will cover adequately from 600 to 700 square feet of structural steel surface.

Hiding Power

Due also to the extreme fineness and character of the pigment used in Hampden No. 502 it has more satisfactory hiding power, or opacity.

More Easily Applied

When paint possesses a high degree of covering and hiding power ease of application is assured. Hampden No. 502 brushes out freely and smoothly and spreads uniformly. It forms a surface quite similar to a baked enamel coating.



Color

The color of Hampden No. 502 is a pleasing, practical gray which is unaffected by fumes and gases that ordinarily smudge and darken metal paints.

Cost

Not the least of the advantages of Hampden No. 502 is its reasonable cost, which compares favorably with that of many paints of less enduring quality.

Three-Coat Exposed Work

Paint on exterior work is in continuous conflict with nature's forces, which seek to detach it from a surface that is expanding and contracting with every change of temperature. To paint exposed metal with three coats of paint of varying texture and weathering properties is to start a new set of opposing and destructive forces at work within the paint itself. Hence we advise, as the best method of protecting exterior metal surfaces, the use of Hampden No. 502 Structural Paint for all three coats rather than to use paints of different composition.

Three-Color Method

Exposed Metal

Where it is determined to use the three-color method as a check on the painter the effect desired may be obtained by making the priming shop coat and the finishing coat of Hampden Structural Gray No. 502 Natural, and the intermediate coat of Hampden Structural Gray No. 502 Dark.

Two Color Method

Exposed Metal

Where expense is an item to be considered and only two coats of paint are to be used we recommend a shop coat of Hampden Structural Gray No. 502 Natural and a finishing coat of Hampden Structural Gray No. 502 Dark.

Hampden Exterior Metal Paints Made From Other Than Sublimed Blue Lead Pigments

Considerable stress has been laid on Hampden Structural Gray No. 502 in this booklet because we believe this to be the best paint for exterior metal surfaces. However, we manufacture metal paints containing other pigments to meet the specifications of Architects and Construction Engineers and these are made with the same painstaking care which has preserved our reputation as makers of good paint for nearly three-quarters of a century.

INTERIOR STRUCTURAL PAINTS

There is no better paint for interior structural metal work than Hampden Structural Gray No. 502, which we recommend for interior as well as exterior use because of its remarkable protective qualities and long life. Its great value as an interior paint on exposed metal is especially apparent in places where gases and fumes permeate the air.

For Exposed Interior Metal

In places where the finishing coats must be white instead of gray, Hampden Structural Gray No. 502 is recommended for the shop coat, with finishing coats of Hampden *Sunray* Mill White Oil Paint.

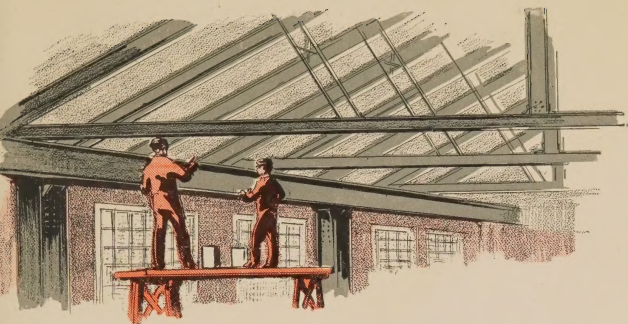
For Structural Metal

Enclosed in Brick or Concrete

The surface of structural metal which is to be enclosed by brick or concrete is subjected to the action of Alkali induced by the moisture in fresh mortar or cement. Alkali is active mainly during construction and to no great extent afterward, but while active it is capable of doing considerable damage to the paint film. For this reason we recommend for this class of work Hampden Structural Gray No. 502 for the undercoat and Hampden Structural Bituminous Black No. 500—an alkali proof paint—for the finishing coat.

In addition to No. 502 we manufacture other interior structural paints which are of somewhat different composition and relatively lower cost. These paints are thoroughly well made from pigments much favored for interior work by many Architects and Engineers. These paints are as follows:

Hampden Structural Red.....	No. 300
Hampden Structural Green.....	No. 400
Hampden Structural Brown.....	No. 303
Hampden Structural Black.....	No. 500
Hampden Structural Graphite.....	No. 307



Specifications

Preparing and Painting Metal Surfaces with **HAMPDEN STRUCTURAL PAINT**

Shop Work

All metal surfaces shall be thoroughly scraped and cleaned of all rust, mill scale, dirt, and dust either with sand blast or steel scrapers and stiff wire brushes. All grease is to be removed by the use of gasoline. Then use a stiff bristle brush and dust off the surface to be painted. After cleaning, apply one heavy coat of Hampden Structural Paint No. 502 Natural Gray. All inaccessible and any exposed surfaces shall receive two coats of the same paint before assembling.

Erection

After erection, all rust spots and all places where the paint is rubbed off shall be thoroughly cleaned. All edges, rivets, nuts and bolt heads to receive an extra coating of the above paint.

Finishing

1. Exterior Work

Apply two coats of Hampden Structural Paint No. 502 (of the same shade or of shade as selected); allowing from three to five days for the first coat to dry thoroughly. Nothing but strictly pure settled raw linseed oil shall be used in reducing and in no greater proportion than 5%.

2. Exposed Interior Work

Apply one coat of Hampden Structural Gray No. 502, or, if a white finish is desired, use Hampden *Sunray* Mill White specifications.

3. When Steel Is Enclosed Within Brick and Concrete

Apply one coat of Hampden Structural Bituminous Black No. 500, to be used as received in the container.

The Hampden Paints specified are to be obtained from the manufacturers.

HAMPDEN PAINT & CHEMICAL CO.
SPRINGFIELD, MASS.



Quality Paints

for Ceilings

Hampden *Sunray* Mill White Oil Paint lasts longer than ordinary white paint. It stays white and is washable. Flat or Gloss Finish. Hampden Interior Flat Finish. A velvety, soft finish in white and ten pleasing colors.

Walls

Hampden *Sunray* Mill White Oil Paint.
Hampden Regal Wall Coating (Cold Water Paint).
Will not rub, blister or scale.
Hampden Interior Flat Finish.

Dado

Hampden Almandine Reds.
Hampden Permanent Greens.
Hampden Rex Reds.
All ready mixed.

Pipes, Structural Iron and Boiler Fronts

Hampden Crucible Enamel for hot and cold surfaces.
Hampden Structural Paint.

Concrete Floors

Hampden Cement Floor Coating preserves the floor. No dust. Grease, alkali and acid proof.

Wood Floors

Hampden floor paint makes a hard, smooth, sanitary surface — easily washed.

Equipment

Hampden Machine Enamels finish with a high, oil proof gloss.

Roofs

Hampden Rubercoat Elastic Carbon Paint. We will show how to patch the leaks.

Exteriors

Hampden Concrete Finish — natural and five colors.
Hampden Ready Mixed Paints.

Special Requirements

Our laboratory meets them all.

Manufactured by

HAMPDEN PAINT & CHEMICAL CO.

Makers of Good Paint for 68 Years

Springfield

Massachusetts

